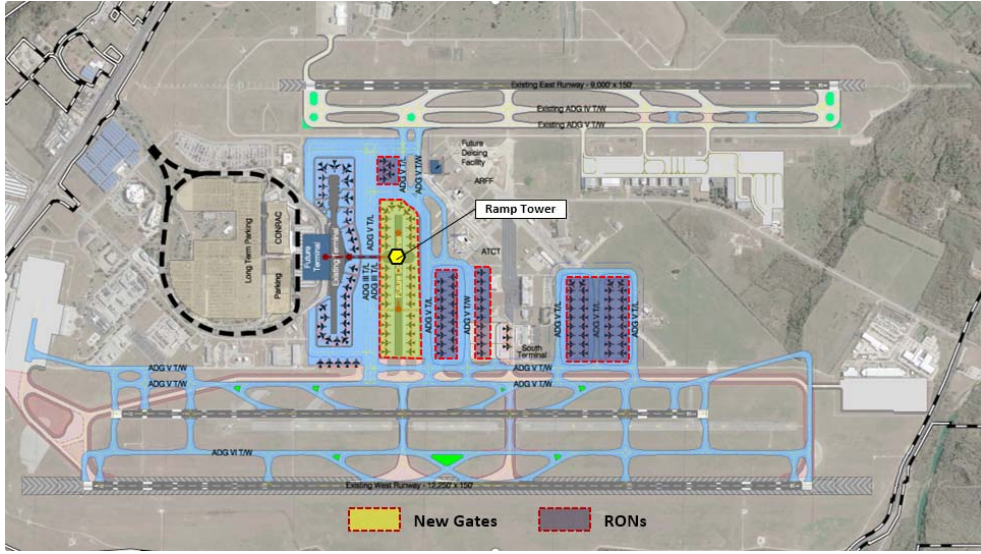




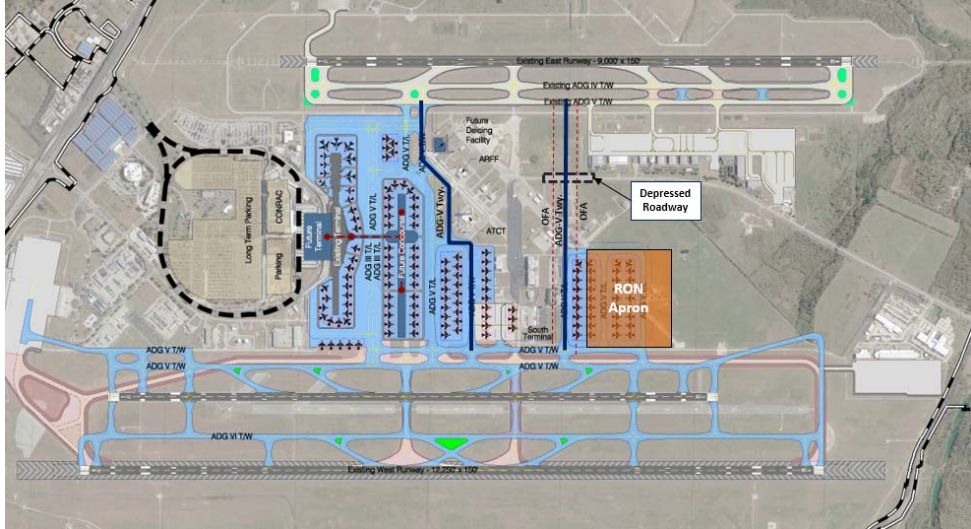
**Appendix 6.2: ABIA MASTER PLAN
SAFETY ASSESSMENT AREAS SRM
PANEL REVIEW**

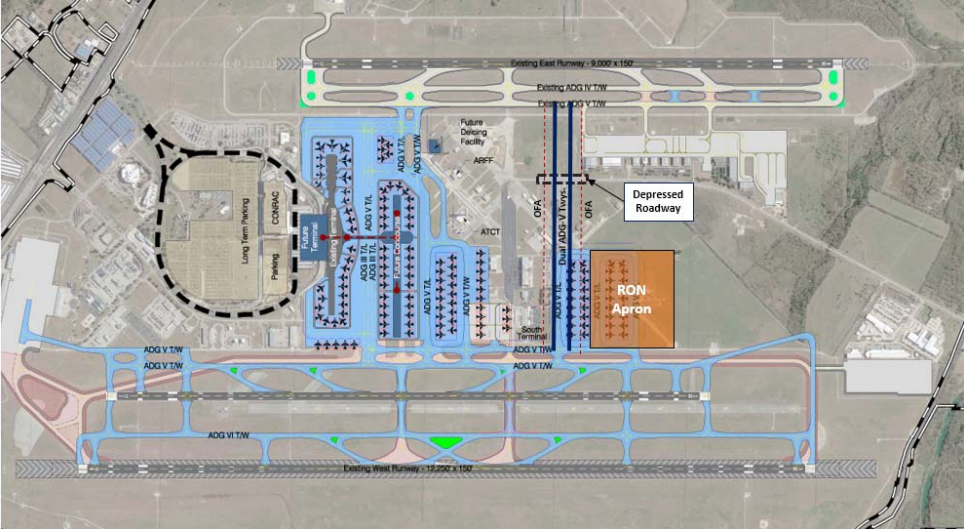
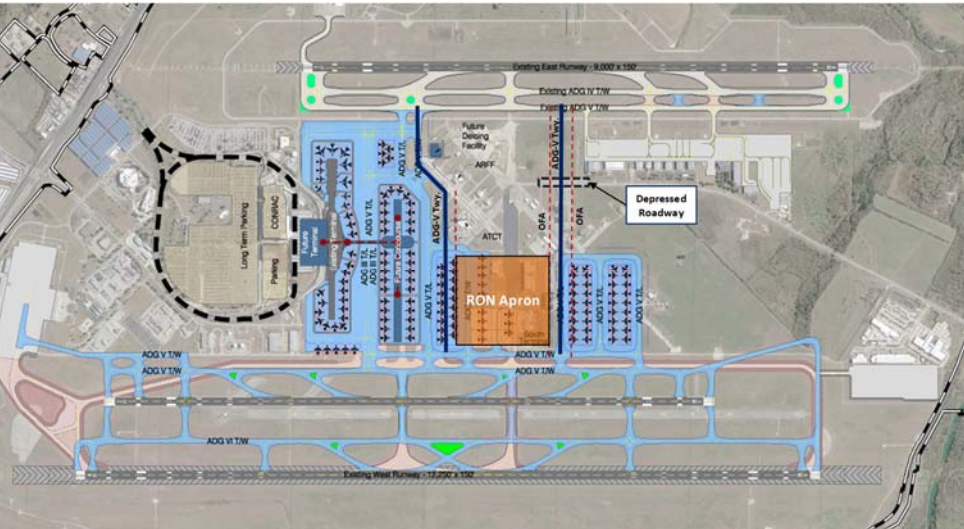


Appendix 6.2: ABIA Master Plan Safety Assessment Areas SRM Panel Review

#	AREA	BRIEF DESCRIPTION	DESCRIPTION OF CONCERN OR CHANGE INCLUDING BACKGROUND	DISCUSSION, DOCUMENTATION, REVIEW, OR RESPONSE	ACTIONS, RECOMMENDATIONS, HAZARD SHEET REFERENCE # (IF ANY)
1.	Runway and Taxiway Geometry	Runway incursion mitigation (RIM) and related Geocode Review	<p>Assess operational revisions due to proposed changes in airfield configuration including new and closed taxiways and runways, and traffic flow taking into consideration FAA RIM and Geocode documentation.</p> <p>Possible areas of concern could include:</p> <ul style="list-style-type: none"> Convergence of numerous taxiway types entering a runway High-speed exit crossing a taxiway Wide expanses of taxi pavements entering or along a runway Direct taxiing access to runways from ramp areas, greater than three-node taxiway intersection Taxiway intersects runway at other than a right angle Short taxi distance from ramp/apron area to a runway 	<p>Key taxiways of concern will be discussed during the SRM Panel session.</p> 	<p>Action: FAA to review Geocode list and provide feedback to SRM Panel on other potential areas of concern.</p> <p>Action: See updated Exhibits/Drawings in SRMP Report based on discussions relating to taxiway connectors K, L, T, G, and E and painted island on Taxiway G (Geocode #1 – Y shaped leading onto Runway 17L-35R).</p> <p>See Hazard # 1 See Hazard # 2 See Hazard # 3</p>
2.	Runway and Taxiway Geometry	Displaced Runway 17R threshold lighting	<p>Displace Runway 17R threshold (1,000') south for installation of in-pavement ALSF-2 approach lighting (2,400') allowing CAT II/III approach certification. This improves south flow ADG-V instrument arrival rates during low visibility CAT II/III operations. Runway 17R threshold displaced 1,000' south also elevates aircraft glide path several 100' AGL higher on final over the City. Resulting Runway 17R declared distance: LDA 11,250' and TORA 12,250'.</p>	<p>It is proposed to provide CAT II/III capability on the new Runway 17C-35C in both directions. CAT II meteorological conditions occur approximately 0.50% of the time, and CAT III approximately 0.27% of the time. It would be easier to install an ALSF-II approach lighting system on the new Runway 17C-35C as opposed to displacing both Runway 17R-35L thresholds and installing in-pavement lights. The new Runway 17C-35C will be 10,000 feet long, which will be adequate for ADG-V aircraft landings.</p>	<p>Proposal does not create an ALP hazard. This is a runway capacity issue.</p> <p>Recommendation: Install a CAT III ALSF-II approach lighting system on the new Runway 17C-35C as opposed to displacing both Runway 17R-35L thresholds and installing in-pavement lights.</p>
3.	Runway and Taxiway Geometry	Displaced Runway 35L threshold modifications	<p>Displace Runway 35L threshold (1,250') north of its current location to accommodate:</p> <ol style="list-style-type: none"> Relocation of the existing ALS from current Onion Creek installations. Installation of in-pavement ALSF-2 approach lighting (2,400') inside the airport perimeter providing CAT II/III approach certification improving north flow instrument arrival rates for ADG-V aircraft during low visibility CAT II/III operations. Resulting Runway 35L declared distances: LDA 11,000' and TORA 12,250'. Add a taxiway/runway connector on Taxiway D located 450' north of relocated threshold Runway 35L as proposed above. This allows southbound Taxiway D aircraft to hold clear of the Runway 35L POFZ. Note: FAA 7110.65 Controllers Handbook defines 450' from runway threshold comparable to full length for departure. 	<p>It is proposed to provide CAT II/III capability on the new Runway 17C-35C in both directions. It will be easier to install an ALSF-II approach lighting system on this runway as opposed to displacing both Runway 17R-35L thresholds and installing in-pavement lights. The new Runway 17C-35C will be 10,000 feet long, which will be adequate for ADG-V aircraft landings.</p> <p>Each of the three runways will have a by-pass taxiway located approximately 450 feet from the departure threshold.</p>	<p>Proposal does not create an ALP hazard.</p> <p>Note: Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR) maintenance access issues were identified by FAA ATC within the Onion Creek floodplain area.</p>

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			4. Add POFZ (200'x800') across Taxiway D south of and abeam Runway 35L glide slope.		
4.	Runway and Taxiway Geometry	Runway 17C-35C connector taxiway	Eliminate Runway 35C connector taxiway depicted with direct access to Runway 17R-35L, located 1,250' north of threshold Runway 35C with connector intersect to Taxiway D.	This section of taxiway will be constructed as part of the Taxiway D and Runway 17R-35L rapid exit taxiway project. It is anticipated that this section of taxiway between Runway 35C and Taxiway D will be used by a large majority of landing aircraft on Runway 17C. This taxiway is located such that landing aircraft can minimize taxi distance back to the terminal area. It is located approximately 1,300 feet from the Runway 35C threshold, which is within the outer thirds of the runway length. Advisory Circular 150/5300-13A, Section 401(b)(5)(d) notes the following, "Avoid "high energy" intersections. These are intersections in the middle third of the runways. By limiting runway crossings to the outer thirds of the runway, the portion of the runway where a pilot can least maneuver to avoid a collision is kept clear."	See revised airfield drawing See Hazard # 2 Action: Revised airfield layout drawings per discussion of runway and rapid exit taxiways Resolution: See updated Exhibits/Drawings in SRMP Report
5.	Runway and Taxiway Geometry	<ol style="list-style-type: none"> Multiple taxiway/ taxilane transitions Note: Transitions are considered different than doglegged taxiways or taxilanes Jet Blast Taxiway centerline separation requirements 	<ol style="list-style-type: none"> There is only one mid-field cross taxiway (southernmost) under direct control of FAA ATCT capable of ADG-V aircraft. Where FAA ATC control permits. Aircraft restrictions at taxiway and taxilane transitions affect routing efficiency. Multiple taxiway /taxilane transitions can be confusing and lead to hazardous and misleading information for airport users. Consider eliminating all parallel ADG-III taxilanes, combine them into a single ADG-V Taxiway Jet blast of heavy aircraft (ADG-V) transitioning from inner taxilanes in close proximity to the western, eastern and mid-terminal end-cap gates raise ramp safety concerns for heavy aircraft making turns under breakaway power. Taxiway B is depicted as taxiway supporting ADG-V aircraft to/from Runway 17L-35R. It appears Taxiway B and Taxiway A centerlines do not meet ADG-V 400' separation standard. Taxiway A is currently NOTAM restricted to aircraft wingspans of 171' to accommodate ADG-IV aircraft on Taxiway B. Adding ADG-V will further restrict Taxiway A. 	<ol style="list-style-type: none"> See the response regarding options for additional crossfield taxiways (Options 1, 2, and 3). Also, see the response regarding the use of taxilanes in the terminal/concourse gate area. It is <u>not</u> recommended to eliminate the dual ADG-III taxilanes between the BJT and remote concourse with a single ADG-V Taxiway There will be approximately 32 active gate positions along this section of dual taxilanes. Reducing this area to a single ADG-V taxiway will result in significant taxi and pushback delays with only a single Taxiway Dual taxi flows and by-pass capability cannot be provided during aircraft pushback operations. It is anticipated that the majority of future aircraft operating at ABIA will continue to be in the ADG-III category. It is anticipated that the number of ADG-V aircraft operating at ABIA will be minimal and will be international aircraft. Most breakaway thrust should be applied along the taxiway/taxilane straight sections, and thereby minimize the velocity of jet blast on the end gate positions. These types of aircraft movements are no different from other larger airports with the same separation distances. Increasing the utilization of Taxiway B to ADG-V aircraft will require additional restrictions on the use of Taxiway A. 	<ol style="list-style-type: none"> Southern ADG-V Taxiway The southern ADG-V TWY has numerous turns. To simplify the layout the western most 90-degree turn was eliminated, and the RON positions will be moved to the south. See Option 3 (Area of Concern #6) for a proposed ADG-V crossfield taxiway to the south. General Aviation (GA) aircraft have a more direct route crossing from Runway 17R-35L to the GA Ramp with the proposed Master Plan options as compared to existing airfield configurations. GA pilots will have an easier time crossing the airfield with fewer turns in the proposed master-plan layout (see revised Option 3). Action: Develop Option 3 crossfield taxiway drawing as discussed in SRM Panel Resolution: See updated Option 3 Exhibit/Drawing in SRMP Report Recommendation: Recommended to prepare a jet blast study for end-cap gates and aircraft pushbacks within the movement and non-movement areas to address potential hazards. See Hazard # 6. 1. Recommendation: Further discussion is warranted to determine the appropriate operational limitations on Taxiways. A

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					and B due to the 400-foot separation of Taxiway A from Runway 17L-35R.
6.	Runway and Taxiway Geometry	Mid-field taxiway routes and constraints	<p>Proposed taxiway layout and flows do not provide the ability to get from one side of the airfield to the other. From an ATC perspective, we don't always put GA aircraft on the east Runway For safety and efficiency, aircraft are often sequenced to the west runway(s) and need to spend more time taxiing to the east side. The new configuration does not allow for easy access.</p> <p>Layouts at Oklahoma City, Louisville, Orlando, Los Angeles, Phoenix, Portland, Salt Lake City, and Dallas-Fort Worth. All have at least two, often parallel, taxiways that go from one side of the airfield to the other without passing through parking areas or the terminal ramp. With the future concourse moving south and eliminating the present day mid-field crossing taxiways, additional taxiways need to be built. My first thought would be at "J" but that runs through the south terminal area. My next thought would be crossing at "N". In both locations, the use of bridges or tunnels may be required to access those parts of the airport served by ARFF, Air Traffic Control, and others.</p> <p>Option 1</p> <ul style="list-style-type: none"> This option provides two non-parallel and separate ADG-V crossfield taxiways. First taxiway is south of the proposed remote concourse and takes a circuitous route to avoid the existing ATCT, ARFF and deicing facilities. Second taxiway is located south of the South Terminal and is a straight-line connection between the runways. This will have no impact on the existing South Terminal and GA/FBO facilities. Required the RON apron to move further south. Need to depress Emma Browning Ave. under the single taxiway bridge. <p>Option 2:</p> <ul style="list-style-type: none"> This option provides dual parallel ADG-V crossfield taxiways. They are located between the existing South Terminal and GA/FBO facilities. Preliminary indications are they will not affect these facilities. Requires the RON apron to move further south. Need to depress Emma Browning Ave. under the dual taxiway bridge. <p>Option 3</p> <ul style="list-style-type: none"> This option provides two ADG-V crossfield taxiways. The north crossfield taxiway is located south of the first remote concourse. 	<p>Providing a dual crossfield ADG-V taxiway at Taxiway 'N' will require demolition of various GA/FBO hangars and apron. It will also eliminate the 20-acre GA expansion area to the north. Providing a dual crossfield ADG-V taxiway at Taxiway 'J' will impact the existing South Terminal and aircraft ramp area. A dual ADG-V taxiway between the runways (east-west direction) would need to be located between Taxiway 'N' and the existing ATCT. This area will have an impact on the South Terminal and require these airlines to relocate to the new BJT/concourse facility. This dual parallel ADG-V taxiway should be located such that it is compatible with the next midfield concourse and long-term (post 20-yr.) terminal expansion. The updated airfield layout has taken the future remote concourses into consideration when locating the crossfield taxiway. It is compatible with the long-term concourse locations.</p> <p>Option 1</p>  <p>Option 2</p>	<p>See assessment area #5 for proposed resolution.</p> <p>Action: Add an additional crossfield taxiway option.</p> <p>Resolution: See Options 1, 2, and a new Option 3 drawing in the column to the left and the Exhibit/Drawing within the SRMP Report as 7discussed during the SRM Panel Session.</p>

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			<ul style="list-style-type: none"> ▪ The south crossfield taxiway is located between the South Terminal and GA/FBO facilities. ▪ Requires the RON apron to move further south. ▪ Need to depress Emma Browning Ave. under the single taxiway bridge. 	 <p>Option 3</p> 	
7.	Runway and Taxiway Geometry	Runway length	<p>10,000' runway vs a 9,000' Runway</p> <p>Was an analysis conducted that assessed a specific widebody to a specific destination as during the hottest day of August? (AC 150/5325-4B).</p>	<p>A runway length analysis was conducted in accordance with FAA guidance and is presented in Chapter 4, <i>Demand/ Capacity Facility Requirements</i>, of the 2040 Master Plan Report. A minimum length of 10,000 feet is recommended to accommodate the anticipated domestic aircraft fleet mix at maximum takeoff weight.</p>	<p>Concern does not create an ALP hazard.</p> <p>A runway length analysis determined that a 10,000-foot-long runway is needed to accommodate long-haul international flight destinations (cargo and commercial).</p>

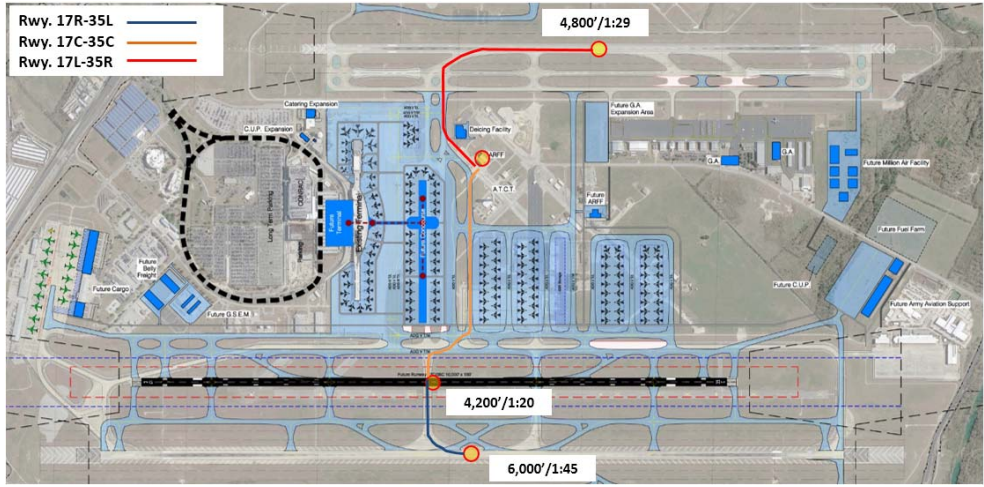
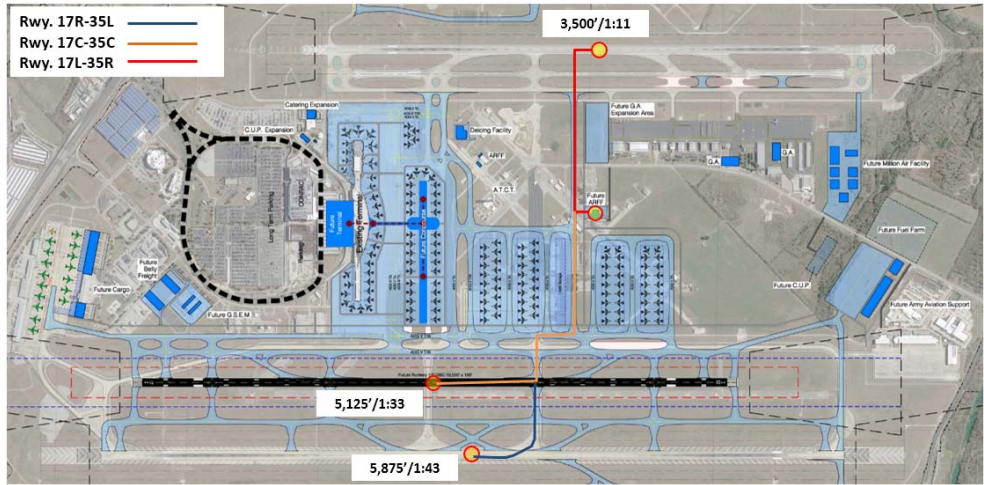
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				This length can also accommodate some of the international fleet mix (non-long-haul operations) and can be used if Runway 17R-35L is closed for maintenance.	
8.	ATC Visibility	Change in airfield and ramp configuration	<p>Tower visibility of the 17R touchdown area would likely be restricted by the new terminal construction</p> <p>Tower visibility of all gates on at the existing terminal and the alley between the existing terminal and the future midfield concourse would be problematical and likely require an Apron Control.</p> <p>Assess potential blind spots in airfield and possibly ramp area if ATC manages pushbacks from gates.</p> <p>Panel Comment: Is the taxiway as shown in options 1, 2 and 3 too close to the Tower? Controllers may not be able to see a taxiway directly below them. Team Response: A detailed line-of-sight analysis will need to be conducted during the taxiway design stage to determine the visibility of this proposed taxiway from the existing ATCT cab. It might be necessary to install CCTV's on the control tower to provide a clear view of various sections along this taxiway.</p>	<p>The tower height is not used to determine potential line-of sight issue. The eye-level elevation of 696.7 MSL is used for this analysis.</p> <p>The new north terminal processor will have no impact on the ATCT line of sight to the new Runway 17C or existing Runway 17R touchdown area. However, the height of the new midfield concourse will need to be considered to assure there are no line of sight issues on other "movement areas."</p> <p>Note: Taxiway D will be developed within the next five years.</p>	<p>Concern does not create an ALP hazard.</p> <p>Action: An ATCT Line of Sight study will be conducted to identify issues related to design and construction of the new midfield concourse and ramp control.</p> <p>Note: A recent line of sight study was conducted by the FAA and can be shared if needed.</p> <p>Note: Per FAA ATO, the City of Austin would have to fund and build a new tower following line of sight issues that cannot be resolved by other means (ground surveillance, CCTV, etc.).</p> <p>Resolution: Future Line of Sight study to be completed (not part of this SRM Panel Report)</p>
9.	Ramp Access and Configuration	Bridge and equipment type constraints	Equipment type restrictions will be required with implementation of an overhead connector.	This will be an overhead connector. The actual height clearances will be adequate to clear an ADG-V aircraft tail of 66 feet (B-747). This will be coordinated during the design of the facility.	Concern does not create an ALP hazard. Connector will be designed and built to meet current FAA design standards.
10.	Ramp Access and Configuration	Taxilane configuration between terminals	<p>Taxilane configuration between terminals is ADG-III/ADG-V/ADG-III. The B797 is likely to be an ADG IV aircraft, and the aircraft may become more popular at AUS than a B787.</p> <p>Any consideration given to taxilane layouts for 2 ADG-IV taxilane plus 1 ADG-V taxilane between the two terminals?</p> <p>What is the distance between the current main terminal and the proposed addition?</p>	<p>The separation between the existing BJT and midfield concourse can be increased, but at a significant increase in program cost due to the relocation of the existing ATCT, ARFF, and new Deicing facility. The current proposed separation distance is approximately 512 feet (center node area) and 838 feet (along the straight gate face), which provides for dual ADG-III taxilanes or on ADG-V taxilane. An increase in this separation distance will impact the above existing facilities. In addition, it is proposed to construct a Ramp Tower on the midfield concourse that will provide positive guidance of all aircraft pushback and taxi movements within the taxilane areas</p> <p>This is not a hazard issue, but an airfield design question regarding the future capability of the airport. This is an issue that must be addressed by the Airport in terms of what capability they wish based on the implementation cost.</p>	<p>Concern does not create an ALP hazard.</p> <p>Future airfield taxilanes will be designed to FAA standards and guidelines while taking into consideration capacity</p> <p>SRM Panel members noted that the most significant hazard on the apron relates to pushback traffic operations.</p> <p>Recommendation: Conduct an operational change/safety meeting with key stakeholders.</p>
11.	Ramp Access and Configuration	Taxilane configuration between terminals	<p>When it comes to the space and taxilanes between terminals, need to consider (reference photos of recent accident ASIANA Plane clips Tail of Turkish Airlines). Organizing departing and arriving traffic may be an interesting. International ADG-V arrivals on 17R would need to navigate from the second high-speed off 17R to parking on the east side of the terminal. In doing so, it would likely disrupt many westbound flights trying to push for a departure on 17R or 17C.</p> <p>International arrivals on Runway 17R can use the south ADG-V taxiway to gain access to the east gates on the BJT. This taxi</p>	The proposed terminal layout has adequate clearances that are in accordance with FAA design criteria and should provide for a safe and efficient operation.	Concern does not create an ALP hazard. Area of concern to be managed as part of the project design phase.

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			route should not interfere with pushback operation on the midfield concourse or BJT. In addition, there are two crossfield taxilane routes around the BJT and remote concourse for ADG-V aircraft to move between each side of the airfield.		
12.	Ramp Access and Configuration	Taxi flow configurations – ramp access including arrivals and departures coordination	ADG-V Departures on 17R or 17C would have a similar impact on flights attempting to depart on 17L.	Detailed taxi flows will need to be developed for each operating condition in both north and south flows. It might be necessary to develop clockwise and counter clockwise flows around the remote concourse to eliminate any head-to-head flows and pushback impacts. Some preliminary taxi flows have been prepared for consideration and refinement as more design details are developed. As noted above, there are multiple taxi routes (taxiways/taxilanes) available for aircraft to move between each side of the airfield. Consideration is being reviewed for an additional crossfield taxiway to the south of the existing South Terminal to provide added taxi flexibility.	Concern does not create an ALP hazard. Area of concern to be managed as part of the project design phase. Action: FAA to review initial aircraft taxi flow analysis completed by L&B and adjust as needed. FAA Response: Option 3 is better than Option 1, but the crossfield taxiways need to be straight, that is, without turns. Perhaps the taxiway can be moved south of the new deicing facility but the ARFF Station and the Control Tower would need to be relocated. Resolution: Option 3 is the direction being pursued for the airfield layout, unless ABIA changes their mind to build a new control tower.
13.	Ramp Access and Configuration	Taxi flow configurations - pushbacks	Disruption would likely impact several pushbacks. The combined frontal area between the old and new north terminal in the alley appears to be approximately 32 gates. Somewhere there is likely to be a few pushbacks or an arrival constraint. Requiring a couple flights to hold their push or an arrival to hold out for an aircraft to taxi will result in delays.	Pushback operations will need to be coordinated with arrival flows to the gate positions. Due to the reduced separation distance, this might result in gate hold delays. This proposed building separation distance was considered to eliminate the need to relocate the existing ATCT, ARFF and new deicing facility. Additional separation can be accommodated, but at a significant increase in the program cost. In addition, it is proposed to construct a Ramp Tower on the remote concourse that will provide positive guidance of all aircraft pushback and taxi movements within the taxilane areas.	Concern does not create an ALP hazard. Area of concern to be managed as part of the project design phase. Recommendation: Expand or develop ABIA Tenant/Ramp Safety Committee to address operational changes and identify related hazards, controls, and risks.
14.	Ramp Access and Configuration	Ramp Operations - Deicing	Deicing is currently conducted at the gates and it has not been decided if there will be a central deicing ramp area.	A remote deicing apron should not result in a hazard if it is located and designed properly. The SRM panel session will help determine the location for a primary or secondary deicing pad(s).	Concern does not create an ALP hazard. Action: Conduct an aircraft deicing study and identify a common deicing pad location. See Hazard # 5
15.	Ramp Access and Configuration	Ramp operations - hold apron	Might need to think about a hold-out apron on the west side	It would be helpful to have an aircraft hold apron on the west side to help coordinate aircraft departures. This will be most important when there is only a partial, single ADG-V taxiway on the west side, until the fuel farm, GSEM and Belly Freight facilities are relocated.	Concern does not create an ALP hazard. Action: Identify potential locations for aircraft hold-aprons for departure sequencing. Resolution: See updated Exhibits/Drawings in SRMP Report
16.	Ramp Access and Configuration	Ramp operations - gate management	Reloading gates for the second early morning push will have to be carefully choreographed to ensure aircraft are not blocked in for their departures on the appropriate Runway (AirOps currently attempts to choreograph tows from the Maintenance Apron to reload gates). While I believe that we will have to accommodate	There will be a dual parallel ADG-V taxiway from the south RON positions to the new gates. There will also be multiple taxi flows around the midfield concourse to access the bridged gate positions. This will be a coordinated effort between the airlines, proposed ramp tower control, and ATCT.	Concern does not create an ALP hazard. Area of concern to be managed by airport standard operational procedures (SOP).

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			several aircraft beyond the number of gates, we need to take a hard look at how many		
17.	Ramp Access and Configuration	Ramp operations – passenger ground operations management	Need to provide for ramp loading on the apron as well as bus access to a terminal apron gate.	The terminal/concourse design will need to consider ramp stairs for passenger ground loading. The use of passenger busses is not recommended due to the additional ground traffic around the aircraft. Busses can be used for remote passenger loading/unloading away from the gate areas.	Concern does not create an ALP hazard. Area of concern to be managed by airport SOP.
18.	Ramp Access and Configuration	Ramp operations – ground service equipment and fueling management	Amount of GSE and Fueling vehicles transiting the apron reinforce the John Wayne land on the apron and at each end of the apron.	A GSE storage/staging area will need to be provided under the midfield concourse or at the ends. There will be no need for aircraft fuel trucks on the new aircraft apron. It is proposed to install a hydrant fueling system for all new gates.	Concern does not create an ALP hazard. Area of concern to be managed by airport SOP.
19.	Ramp Access and Configuration	Remain Overnight (RON) and dual taxilane management	RON and aircraft flow and coordination with the dual taxilane operations. Current coordination would extend to any future changes.	Current ramp restrictions for RON and taxilane use is from 8pm to 8am. The RON is communicated, managed, and controlled by Airport Operations. RON's are currently used for commercial operations only.	Concern does not create an ALP hazard. Area of concern to be managed by airport SOP.
20.	Ramp Access and Configuration	Ramp Tower Operations	<p>1) Ramp control will very likely be required due to congestion.</p> <p>2) There are efficiency and safety advantages (think the safe and expeditious flow of air traffic) of having FAA ATC controlling aircraft parking using defined movement area boundaries located behind aircraft and gate positions.</p> <p>Line of sight issues can be addressed with FAA dedicated CCTV cameras.</p> <p>Ramp towers demand complex communication and coordination, the cooperative interaction and trust of multiple air carriers, air traffic controllers using available airport facilities and support. Complex taxilane designs, aircraft restrictions and taxi routes required to navigate non-movement areas can slow the most experienced users. Ultimately, aircraft operators must still gain an ATC clearance entering movement areas. In my experience, carrier conflicts put ramp tower operators at odds with ATC and intensify perception of airport bias.</p>	<p>1) Correct, it is recommended that a Ramp Tower be constructed on the new midfield concourse to manage aircraft pushback and taxi operations. The area between the BJT and midfield concourse will be a non-movement area and under control of the proposed Ramp Tower.</p> <p>2) As noted in AC 150/5300-13, Section 513, "It is essential for all aircraft movement areas on the airport to be visible to the controllers in the ATCT cab. Most apron areas are considered non-movement areas. Parking areas on aprons should be designed so aircraft do not block the ATCT line of sight to the movement areas. At some larger commercial service airports there are separate airport or airline ramp control towers, and sophisticated ground radar tracking systems to monitor the aircraft movement on aprons and on the airport."</p> <p>An ATCT Line of Sight study will be conducted to identify any visibility issues from the existing ATCT and an eye-level elevation of 696.7 MSL.</p>	<p>Concern does not create an ALP hazard.</p> <p>Recommendation: ABIA staff to conduct a ramp control, physical tower, or virtual tower study to assess potential improvements to ramp safety and operations.</p> <p>Ramp control considered an industry best practice and could be considered a potential mitigation for a new ATCT.</p>

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21.	Vehicle Service Roads	Existing airside Hot Spot and potential positive or negative impact of master plan design	At Hot Spot 1, drivers heading northbound on the East service road may be unaware of aircraft from Runway 35R exiting at Taxiway G and Taxiway H. FAA "Typically, a hot spot is a complex or confusing taxiway/taxiway or taxiway/runway intersection. A confusing condition may be compounded by a miscommunication between a controller and a pilot and may cause an aircraft separation standard to be compromised.	<p>ABIA is managing the current hot spot with controls such as implementation of an aircraft hold bar and driver training. Existing operational procedures and ground guidance equipment might provide for an adequate safe condition (sufficient controls) per ATC and pilots.</p> <p>See detailed list of existing controls and comments below:</p> <ol style="list-style-type: none"> 1. The intersections of service roads and taxiways are well marked including signs that are moved from time to time to trigger attention. 2. Using the service road to transit to/from the North Campus is covered in driver training given every two years to be allowed to drive on ramps. Employees trained for Movement Area Access have a comprehensive program that includes academics, written test, movement area driving practice and a check ride administered by Airport Operations. 3. When RVR is less than 1200', Airport Operations escorts all vehicles seeking to cross the taxiways. Airport Operations calls for clearance for the convoy to cross the taxiways. 4. Traffic that crosses the taxiways will be substantially decreased with the construction of a new facility on the east side of the airport to house employees in the current Maintenance Complex. Employees in the old complex must cross the taxiways to get to work. The new complex will eliminate the need of these employees to cross the taxiways. 	<p>Concern does not create an ALP hazard.</p> <p>The FAA Runway Safety Action Team (RSAT) identified the hot spot approximately two year ago and since implementation, existing controls appear to be managing the hot spot hazard sufficiently.</p> <p>Action: ABIA to provide a list of hot spot controls, Resolution: See discussion column items 1 to 4.</p>
22.	Vehicle Service Roads	VSR and ramp operations	Assess existing and future vehicle service road locations including ramp area and taxiway/taxilane crossings, gate and cargo push back areas, terminal access areas, etc.	It is recommended that a Ramp Tower be constructed on the new midfield concourse to manage aircraft pushback and taxi operations. The area between the BJT and midfield concourse will be a non-movement area and under control of the proposed Ramp Tower.	<p>Concern does not create an ALP hazard.</p> <p>Vehicle Service Road (VSR) locations discussed, including benefits and constraints of a head-of-stand road vs. a tail-of-stand. Ground Service Equipment (GSE) logistics and fixed links to span over a head-of-stand road were also discussed. Note that moving to a head-of-stand VSR will push ALP elements further to the south.</p> <p>Action: ABIA to decide whether VSR will be located at the head-of-stand or tail-of-stand.</p> <p>Resolution: Standard configuration (tail-of-stand) will not change from current practice in the U.S.; thus, retain tail-of-stand standard.</p>
23.	Vehicle Service Roads	West Service Road	Possible necessary service on the west side of the more complex because of multiple taxilanes and the likely proximity to a north/south taxiway west of the service road. In addition, the service road is likely to carry considerably more traffic	There will most likely be more traffic on the west service road leading into the ramp area. Some modifications to its current alignment will be necessary and the configuration of the guard post.	<p>Concern does not create an ALP hazard.</p> <p>Action: Add west-side service road to the ALP as a means to address additional traffic on the west side.</p> <p>Resolution: See updated Exhibits/Drawings in SRMP Report</p>
24.	Vehicle Service Roads	Terminal connections	Additional service road connecting the middle of the existing terminal with the middle of the new north terminal may be necessary.	Additional airside service road connectors will be provided between the BJT and the new midfield concourse.	Concern does not create an ALP hazard.

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					<p>Action: Add VSR connectors crossing the taxilanes between the BJT and new remote concourse.</p> <p>Resolution: See updated Exhibits/Drawings in SRMP Report</p>
25.	Vehicle Service Roads	Bag handling routes and locations	Strategy for bags has not been considered; however, how both inbound and outbound bags will be handled likely will have a major impact on apron traffic. Will the baggage carts have to travel on a service road at the center of the alleyway between the current and future terminals? If so, that will be a hot spot.	<p>The proposed baggage system requirements are provided in Chapter 4, <i>Demand/Capacity Facility Requirements</i>, and will be detailed in Chapter 5, <i>Alternatives Analysis</i> of the 2040 Master Plan Report. The transfer of bags will be via a dedicated baggage conveyor system that will not require ramp vehicles transitioning across the aprons. The new baggage conveyor will be either underground or along the overhead walkway/PRT between the new north terminal and midfield concourse. There will be no need for baggage carts crossing between the north terminal and midfield concourse.</p> <p>Baggage carts will be on the apron area around the aircraft, however they will not be transitioning back to the north terminal. There will always be GSE traffic going between the BJT and midfield concourse, which will need to cross the dual ADG-III taxilanes. This is common practice with this type of layout. The number of crossing will be kept to a minimum to reduce the potential for interactions with taxiing aircraft through this area. GSE SOP will need to be developed.</p>	<p>Concern does not create an ALP hazard. Operational concern to be addressed during the design phase.</p> <p>Bags will not be physically driven from concourse to concourse. A baggage system including conveyors will be used to move bags from concourse to concourse.</p> <p>Note: Take into consideration during design phase that cargo trains can be as long as 85 feet and could block one to two positions if cargo trains are parked behind aircraft. Limit the length of cargo trains on the ramp area.</p>
26.	Vehicle Service Roads	Bag handling routes and locations	Handling bags will be a significant issue. If AUS attracts the number of flights that are planned for given the major additional gates, some thought may need to be made toward handling connecting passengers and bags	A new baggage system is recommended in the 2040 Master Plan and will be constructed to accommodate the increase in passengers and the potential for connecting passengers.	See # 25 above
27.	ARFF and EMS Response	Response routes	Change in EMS response to the new north terminal. Unless the patient is on the apron level, EMS normally responds to landside level in front of the terminal and goes to the gate area through a TSA checkpoint. The response route and access to the new north terminal area will likely mean EMS will need to access the apron and enter new north terminal from the apron.	It is possible to provide a security gate for EMS access to the new north terminal lower level roadway on the east side. In addition, EMS response can also be provided by the off-airport Engine Company #42 fire station on Cardinal Loop. They will have the ability to access the new north terminal on the upper and lower roadway levels. EMS access to the new midfield concourse will be via various points along the length of the concourse on the apron level through marked security doors.	<p>Concern does not create an ALP hazard.</p> <p>EMS response to the terminal landside can be supplemented by Engine Company #42.</p> <p>EMS access to the new north terminal and midfield concourses to be addressed during design phase, including routes and access points.</p>

<p>28.</p>	<p>ARFF and EMS Response</p>	<p>Response routes</p>	<p>Determine ARFF impacts related to changes in airfield configuration including distance to firehouse, ARFF routes, changes in aircraft equipment type, and ARFF Index determination.</p> <p>A 3-minute response to 17R/35L is jeopardized by having to negotiate the non-movement area</p> <p>Location of existing ARFF facility, potential need for a new or moved facility, response time standards for airport</p> <p>Confirm current ARFF Index D and possible required change to Index E to accommodate larger aircraft >200.</p>	<p>ARFF response on a non-movement taxilane should be no different from that on a movement taxiway surface. There will need to be an additional channel of communication with the proposed Ramp Tower to assure there is a clear path available to the runways. The Exhibit below provides a preliminary ARFF vehicle route from the existing station to each of the runway centerlines and thresholds. In some cases, it will be necessary to construct additional service roads to provide a direct route from the ramp area to the runway surface. This is a common practice at most airports</p> <p>Existing ARFF Station Response Route and Times</p>  <p>Future ARFF Station Response Route and Times</p> 	<p>Concern does not create an ALP hazard.</p> <p>Action: Share assumptions for response times and review routes with ARFF. Consider equipment staging areas on taxiways for the west side runways.</p> <p>Response: ARFF feedback received for new station response routes and times including:</p> <p>Runway 17L/35R is mostly unchanged, and I do not need an additional roadway that goes in the north direction. I think it would cause unnecessary confusion to pilots when in a southbound flow. I have plenty taxiway access with what is there currently.</p> <p>Runway 17R/35L. A small road access from the existing station to a taxiway will need to be added. From the meeting we decided to remove the turn where the RON apron is south of the new terminal expansion. Essentially splitting the RON into two sections. Doing that would move the proposed westbound response route to the south avoiding most of the terminal apron traffic and any blockage from pushbacks of aircrafts (Refer Yellow Line on drawing). I am assuming that this taxiway will cross Taxiway Charley and extend to the new Taxiway Delta. ARFF could use Taxiway Delta for access to 17R/35L I would not need any additional roads; the vehicles would just use the exiting exit ramps. For 17R/35L.</p> <p>After new cross-field Taxiways are built: Once the new cross-field taxiway and new fire station are built, we will have direct access to the cross-field taxiway and a taxiway to the terminal apron. This will create a much easier and faster route to the runways. If the taxiway is completed before the station, maybe a road should be built to the cross-field taxiway giving us better access to the runways.</p> <p>Action: Add a new proposed ARFF station on the ALP that would address the long-term airport geometry. See Future ARFF Station Response Route and Times Exhibits 6.5-7, 6.5-8 and 6.5-9</p> <p>Resolution: See updated Exhibits/Drawings in SRMP Report</p>
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29.	RPZ/RSA	RPZ area review	<p>Review RPZ impacts from the airfield changes. The runway protection zone (RPZ) protects people and property on the ground surrounding the runway areas.</p> <p>Possible requirement to relocate military facilities due to the new runway RPZ location. It may be difficult to take hangars and buildings away from the Army Guard and move them.</p> <p>The Army Aviation Support Facility serves as a rapid response Air Defense Base & state of the art aircraft maintenance facility for the Texas Air National Guard Units serving the Central Texas area." http://trarch.com/cpt_projects/austin-army-aviation-support-facility/</p>	<p>Analysis performed. See reference slides that demonstrate RPZ areas for discussion. Based on the location of the proposed 10,000-foot long new Runway 17C-35C, various military buildings and ramp area will be located within the RPZ of Runway 35C. Per current FAA design criteria¹, these buildings and ramp area will need to be relocated and removed from the RPZ boundary.</p> <p>In addition, there will need to be further study to determine if the existing Army Guard buildings will be a penetration to the new Runway 17C-35C Part 77 surfaces. If these buildings and ramp area cannot be relocated, then it will be necessary to reduce the runway length appropriately.</p>	<p>Note: Greenwood/Martin Cemetery is located within the existing Runway 17R RPZ.</p> <p>Action: FAA to review RPZ revisions and make recommendations to address future hazards associated buildings and non-aviation activities.</p> <p>Resolution: FAA has provided guidance to ABIA as presented below:</p> <p>All new RPZs must remain clear of development (existing or future). This will require relocation of the U.S. Army Reserve and Parking Spot facilities as identified. FAA will not accept the use of declared distance criteria or displaced thresholds with new runways.</p> <ul style="list-style-type: none"> Existing Runway 17R-RPZ- Acquire Avigation Easement Existing Runway 35L-RPZ- No Action Required Existing Runway 17L-RPZ- Acquire Avigation Easement Existing Runway 35R-RPZ- No Action Required Future Runway 17C-RPZ- Acquire Land Future Runway 35C-RPZ- Acquire Land & Avigation <p>Action: Image for 35C RPZ area updated to include hangar located on south side of the military ramp.</p> <p>Resolution: See updated Exhibits/Drawings in SRMP Report</p>
30.	RPZ/RSA	RSA review	<p>Review RSA impacts from the airfield changes. The runway safety area (RSA) is designed to protect aircraft and passengers on runways</p>	<p>Analysis performed. See reference slides that demonstrate RSA areas for discussion.</p>	<p>See # 29 above</p>
31.	Noise Management	Noise impacts	<p>Noise could be an issue with the new runway; however, FAA has bounded the scope of hazard review to the 15-year plan and the runway is not planned until after the 15-year schedule.</p>	<p>Ensure new runway and noise issues are documented as out of scope for the SRM Panel Review. There are no recommendations that would change the existing noise contours or mitigation efforts. The new runway is not needed until 2047, so this Master Plan will not be assessing noise impacts associated with this Runway</p>	<p>Concern does not create an ALP hazard. Area of concern to be managed by airport operations. Analysis to be performed as</p>

¹ FAA Memorandum, Interim Guidance on Land Uses within a Runway Protection Zone, September 27, 2012.

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					part of the new runway design phase to develop future noise contours.
32.	Environmental Management	Environmental impacts	Master planning and future development are required to follow FAA guidance and regulatory requirements ABIA complies with FAA regulatory and planning requirements that could affect the environment. https://www.faa.gov/airports/environmental/policy_guidance/	There are no new environmental hazards introduced from master planning activities.	Concern does not create an ALP hazard. Area of concern to be managed by airport operations.
33.	Runway and Taxiway Geometry	Taxiway G crossing center runway	Runway incursion mitigation (RIM) and related Geocode Review	Would be considered a “high-energy intersection”. The taxiway is within the middle-third of Runway. Try to limit taxiway crossings to the outer-third of the runway. See Area #4 for similar concern.	See Area of Concern #4 See Hazard # 2